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Short Communication

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Evolution of Space Technology & Sustainable Development

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Abstract:

Space technology is producing a huge impact on mankind since the Sputnik era. Biological system firstly adapts & then improves by a process of natural selection; Darwin called it EVOLU-TION. Similarly, at the beginning of the twentieth century, spacecraft subsystems were subject to steady improvements on technology, but within last decades because of exponentially growth of space system (Government & Private), space exploration has shown impressive record on innovation, several global challenges, culture & inspiration and many more. The challenge of space exploration drives a continuing effort to design ever more capable, reliable, and efficient systems requiring the utmost ingenuity. But the question rises; can this technological revolution be able to maintain the sustainability for future generations? So, this speech will be on how we can bring sustainability by using space technologies. It will also be discussed how open source Earth Observation data (Geospatial Informations) along with Satellite Positioning System, Satellite Communication System and Astrobiological research on space, are supporting the UNOOSA (United Nations Office for Outer Space Affairs) mentioned 17 SDGs (Sustainable Development Goals). Intensive research and analysis on space exploration data, geographical data, directly and indirectly, benefit the humankind and drives progress in human health care, robotics and overall to save our Earth. This talk also will point out the interlink between astrodynamical aspects, satellite technological progress (Laser Communication, Constellation, miniaturized electric Propulsion), space missions (Enceladus mission) and Ecological & Economical development in sustainable goals.

Biography:

Swarnajyoti Mukherjee, is the student of MSc in Space Engineering at Politecnico di Milano, Italy. But he is working at ESA's project CYCLOPS, developing a new technology for Inter-Satellite (LEO Constellation Design) Laser Communication at Luxembourg. Previoulsy, he completed his Bachelor (Dual Degree) in Aerospace Engineering from India & China. He was also part of ESA Entreprenuership network, Social Innovation Society in Italy and selected (team) for MIT Entreprenuership training. He has worked on Orbit Designing, ADCS, Space System, Mission Design, Payload Modelling, Reusable rocket design, Liquid Propellent engine design, Satellite Communication, Structural Dynamics and severel research works.